

RESPONSE TO OFFICE ACTION
DATED APRIL 27, 2007

Appln. No. 10/573,447

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Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1 (currently amended). An electronic circuit, capable of terminating a plurality of conductors at, or near, a node on a network, comprising detecting means, operable to detect current in at least one of the plurality of conductors, and said detecting means comprising a sensing resistor connected in series with at least one of the plurality of conductors, switching means comprising a transistor, said switching means being operable to switch the circuit between being a continuing circuit, upon the detecting means detecting current greater than a first predetermined threshold, and being a terminating circuit, upon the detecting means detecting current at, or less than, a second predetermined threshold, means for detecting voltage across the sensing resistor, and impedance matching means, wherein said impedance matching means is connected to said at least one conductor and a second conductor by way of said transistor the detecting means comprises a sensing resistor, connected in series with the at least one of the plurality of conductors, and means for detecting voltage across the sensing resistor, such that a change in current flowing in the at least one of the plurality of conductors, indicative of a break or fault in a said network, is detected by sensing a change in voltage across the sensing resistor.

Claim 2 (canceled).

3 (currently amended). An electronic circuit as claimed in Claim 2 1, wherein the impedance matching means comprises a terminating resistor connected in series with a terminating capacitor.

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4 (previously presented). An electronic circuit as claimed in Claim 1, wherein the first threshold is the same as the second threshold.

5 (previously presented). An electronic circuit as claimed in Claim 1, wherein the means for detecting voltage is a differential amplifier.

Claim 6 (canceled)

7 (currently amended). An electronic circuit as claimed in Claim 6 & 1, wherein the transistor comprises a base terminal connected to an output of the detecting means.

8 (currently amended). An electronic circuit as claimed in Claim 6 & 1, wherein the transistor comprises ~~a collector an emitter~~ terminal, connected to the impedance matching means, and ~~an emitter~~ a collector terminal connected to the, or each, of the other conductors.

9 (previously presented). A node comprising an electronic circuit as claimed in Claim 1.

10 (previously presented). A node as claimed in Claim 9, further comprising checking means operable, upon the detecting means detecting current at, or less than, the second predetermined threshold, to check the status of the conductors connected to an adjacent node.

11 (previously presented). A network comprising at least one electronic circuit as claimed in Claim 1.

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12 (previously presented). A network as claimed in Claim 11, comprising a plurality of power supplies operable to provide current flowing in opposing directions through the network.